		NARSIMHAREDDY ENGINEERING COLLEG (UCC AUTONOMOUS)	E		
L	11 8.	Tech II Semester (NR21) Regular & Supplementary Examination	n, Ju	ne 202	5
		COMPUTER NETWORKS			
		(Computer Science and Engineering (AIML)			
Tim	ie : 3	hours Maximum	Ma	rks: 7	0
	NARSIMHAREDDY ENGINEERING COLLEG (UGC AUTONOMOUS) III B.Tech II Semester (NR21) Regular & Supplementary Examinatio COMPUTER NETWORKS (Computer Science and Engineering (AIML) ime : 3 hours Maximum ote: • This question paper contains two parts, A and B • Part A is compulsory which carries 20 marks (10 sub questions an unit carry 2 Marks). Answer all questions in Part A • Part A is compulsory which carries 20 marks (10 sub questions an unit carry 2 Marks). Answer all questions from each unit carries 10 Marks and may have a, b sub questions Part-A Answer all questions Question 0 O Marks and may have a, b sub questions Part-A Answer all questions Question 0 Differentiate between a Hub and a Switch in a network. C. How does a simplex stop-and-mait protocol differ when used in a noisy channel? d. What is the difference between forward and backward error correction? List the factors that influence QoS in network communication. g. List the advantages and disadvantages of using TCP in network communication.	Ea (2)	ch que 0 Mari	stion (3)	
0	No	Question	м	co	BI,
FX.	1.0	What is the primary function of network software?	2	COL	LI
1.1	6	Differentiate between a Hub and a Switch in a network.	2	COL	1.1
	e.	How does a simplex stop-and-wait protocol differ when used in a noisy channel?	2	CO2	1.2
	d.	What is the difference between ferward and backward error correction?	2	CO2	LI
	e.	How does the network layer operate in the context of the Internet?	2	CO3	1.2
	1.	List the factors that influence QoS in network communication.	2	CO3	LI
	R	List the services provided by the transport layer.	2	CO4	LI
	h.	List the advantages and disadvantages of using TCP in network communication.	2	C04	11
	1	What is the domain name system?	12	1005	1.1

Hall Ticket No.:

Q.P Code: AM3203PC

i. What is the domain name system?
 J. List the main functions of simple network management protocol.
 Z COS Li
Peet-B
(50 Marks)

Part-B Answer all the Units

All Questions carry equal Marks

0.	No	Question	M	CO	BL
- 40	-	UNIT-I			
2)	8.	Explain the OSI model and its seven layers briefly with a neat sketch.	5	COI	13
	b.	Discuss the process of data transmission through fiber optic cables.	5	COI	1.2
	-	OR			
3)	a.	Briefly explain ARPANET and its significance in the history of computer networking	5	COI	IJ
	ь	Describe twisted pair cables and their advantages in working.	5	COI	L2
-	1	UNIT-II			
4)	а.	Explain the concept of sliding window protocols and their advantages over stop-and-wait protocols	5	CO2	ω
_				Pag	# 1 of 2

b. Discuss the operation of carrier sense multiple access 5 CO2 1.2 protocols in the medium access sublayer. 5) a. Differentiate between Go-Back-N and Selective Repeat 5 1.2 CO2 protocols in sliding window techniques. Explain the ALOHA protocol and how it addresses the 1.3 CO2 5 b. Explain the ALONS end channel allocation problem. UNIT-III a. What are the primary design issues in the network layer, and 5 CO3
 why are they crucial for network architecture? Explain. 1.2 b. Explain the Internet Protocol addressing structure OR U. CO3 7) a. Discuss the operation of flooding as a routing algorithm in 5 12 CO3 the network layer. b. Explain the principles of distance vector routing algorithms D CO3 3 and provide an example. 8) a. Discuss the role of connection management in transport layer 5 CO4 1.2 protocols, b. Explain scenarios where UDP is preferred over TCP in 5 D CO4 Explain scenarios network applications OR 9) a. Describe the transmission control protocol and its main 5 CO4 13 features. b. Explain the concept of negative acknowledgements in TCP 13 5 CO4 with an example. UNIT-V
 10)
 a.
 Explain the hierarchical structure of domain names in DNS.
 5
 COS

 b.
 Discuss the architecture of SMTP.
 5
 COS

 OR
 0
 0
 0
 1.3 5 CO5 1.2 11) a. Describe the concept of streaming audio and video over the 5 CO5 IJ Internet. b. Write about any one protocol for streaming video. L2 5 CO5

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		NARSIMHAREDDY ENGINEERING COLLEG (UCC AUTONOMOUS)	E		
L	11 8.	Tech II Semester (NR21) Regular & Supplementary Examination	n, Ju	ne 202	5
		COMPUTER NETWORKS			
		(Computer Science and Engineering (AIML)			
Tim	ie : 3	hours Maximum	Ma	rks: 7	0
	NARSIMHAREDDY ENGINEERING COLLEG (UGC AUTONOMOUS) III B.Tech II Semester (NR21) Regular & Supplementary Examinatio COMPUTER NETWORKS (Computer Science and Engineering (AIML) ime : 3 hours Maximum ote: • This question paper contains two parts, A and B • Part A is compulsory which carries 20 marks (10 sub questions an unit carry 2 Marks). Answer all questions in Part A • Part A is compulsory which carries 20 marks (10 sub questions an unit carry 2 Marks). Answer all questions from each unit carries 10 Marks and may have a, b sub questions Part-A Answer all questions Question 0 O Marks and may have a, b sub questions Part-A Answer all questions Question 0 Differentiate between a Hub and a Switch in a network. C. How does a simplex stop-and-mait protocol differ when used in a noisy channel? d. What is the difference between forward and backward error correction? List the factors that influence QoS in network communication. g. List the advantages and disadvantages of using TCP in network communication.	Ea (2)	ch que 0 Mari	stion (3)	
0	No	Question	м	co	BI,
FX.	1.0	What is the primary function of network software?	2	COL	LI
1.1	6	Differentiate between a Hub and a Switch in a network.	2	COL	1.1
	e.	How does a simplex stop-and-wait protocol differ when used in a noisy channel?	2	CO2	1.2
	d.	What is the difference between ferward and backward error correction?	2	CO2	LI
	e.	How does the network layer operate in the context of the Internet?	2	CO3	1.2
	1.	List the factors that influence QoS in network communication.	2	CO3	LI
	R	List the services provided by the transport layer.	2	CO4	LI
	h.	List the advantages and disadvantages of using TCP in network communication.	2	C04	11
	1	What is the domain name system?	12	1005	1.1

Hall Ticket No.:

Q.P Code: AM3203PC

i. What is the domain name system?
 J. List the main functions of simple network management protocol.
 Z COS Li
Peet-B
(50 Marks)

Part-B Answer all the Units

All Questions carry equal Marks

0.	No	Question	M	CO	BL
- 40	-	UNIT-I			
2)	8.	Explain the OSI model and its seven layers briefly with a neat sketch.	5	COI	13
	b.	Discuss the process of data transmission through fiber optic cables.	5	COI	1.2
	-	OR			
3)	a.	Briefly explain ARPANET and its significance in the history of computer networking	5	COI	IJ
	ь	Describe twisted pair cables and their advantages in working.	5	COI	L2
-	1	UNIT-II			
4)	а.	Explain the concept of sliding window protocols and their advantages over stop-and-wait protocols	5	CO2	ω
_				Pag	# 1 of 2

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 a.
 Explain the hierarchical structure of domain names in DNS.
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 COS

 b.
 Discuss the architecture of SMTP.
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 COS

 OR
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 1.3 5 CO5 1.2 11) a. Describe the concept of streaming audio and video over the 5 CO5 IJ Internet. b. Write about any one protocol for streaming video. L2 5 CO5

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Q.P.C.	ode: CS3103PC	Hall Ticket No.				
	NARSIMHAR	REDDY ENGINEE (UGC AUTONOMO	RING COLL	EGE		
	III B.Tech I Semester	(NR21) Supplementary	Examination, Ju	une 202	5	
		COMPUTER NETWO	RKS			
	(Co	mputer Science and En	gineering)			
Time	: 3 hours		Maxim	um ma	rks: 70	
	carries 10 Marks and	may have a, b sub question Part-A Answer all question	nis	(20) Mark	(5)
0.10	1	Question		M	CO	RI
11 4	What is encapsulation?			2	COL	1.1
1	Define LAN			2	COL	LI
	What are the functions of	of LLC?		2	CO2	1.1
4	What is a virtual curcuit	network?		2	CO2	L
	Define flooding			2	CO3	1.1
-		ad by contingeneratocole?		2	CO3	L
	what are the niwuries us	ed by routing aprotocols.		-		
1	What is meant by segme	ent?		2	CO4	1.1
	What is meant by segme Define TCP	nt?		2	CO4 CO4	1.1 1.1
	What are the inwittes us What is meant by segme Define TCP What is the purpose of I	ent? Domain Name System?		2 2 2 2 2	CO4 CO4 CO5	
1144	What are the inwrites us What is meant by segme Define TCP What is the purpose of I Define HTTP.	ent? Domain Name System?		22		CO4 CO4 CO5 CO5

Answer all the Units All Questions carry equal Marks

Q.	1	Question	M	CO	BL.
	-	UNIT-I			
2)	2	Explain about wireless transmission	5	COI	1.3
	b	Write about twisted pair cable and coaxial cable	5	COI	1.2
		OR	-		
3)	a	Explain about various transmission media in physical layer with a neat sketch	5	COI	1.3
	h	Discuss about Internet standards	5	COL	1.2
	_	UNIT-II			
4)	a	1 xplain about Error detection and Error Correction.	5	CO2	13
	b	Mention the types of errors and explain each type.	5	CO2	1.2
_		OR	- Contractor		
5)	a	Explain Hamming Code in Error Correction	15	CO2	13
	b	Explain CSMA/CD and CSMA/CA in detail	5	CO2	12

Page 1 of 2

C

		UNIT-III			
6)	а.	Explain store and forward packet switching.	5	CO3	1.3
	b.	Difference between Broadcasting and Multi casting.	5	CO3	1.2
		OR			
7)	a.	Explain token bucket algorithm with neat diagram.	5	CO3	1.3
	b.	Explain different types of routing algorithms.	5	CO3	1.3
		UNIT-IV			
8)	a.	Enumerate the mechanism of three-way handshake protocol for TCP.	5	CO4	L4
	b.	Explain the function of TCP/IP protocol.	5	CO4	1.3
		OR			
9)	a.	Explain about elements of transport protocols.	5	CO4	L3
	b.	Show the different approaches in Packet Switching. Explain them in detail.	5	CO4	1.2
		UNIT-V			
10)	a.	Explain in detail about function and structure of e-mail protocol.	5	CO5	1.3
	b.	Write briefly about World wide web.	5	COS	1.2
		OR			
11)	a.	Explain about Application layer and its services in detail?	5	CO5	1.3
	b.	Explain the working of Electronic mail.	5	COS	1.2

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Page 2 of 2

Q.P.C.	ode: CS3103PC	Hall Ticket No.				
	NARSIMHAR	REDDY ENGINEE (UGC AUTONOMO	RING COLL	EGE		
	III B.Tech I Semester	(NR21) Supplementary	Examination, Ju	une 202	5	
		COMPUTER NETWO	RKS			
	(Co	mputer Science and En	gineering)			
Time	: 3 hours		Maxim	um ma	rks: 70	
	carries 10 Marks and	may have a, b sub question Part-A Answer all question	nis	(20) Mark	(5)
0.10	1	Question		M	CO	RI
11 4	What is encapsulation?			2	COL	1.1
1	Define LAN			2	COI	LI
	What are the functions of	of LLC?		2	CO2	1.1
4	What is a virtual curcuit	network?		2	CO2	L
	Define flooding			2	CO3	1.1
-		ad by contingeneratocole?		2	CO3	L
	what are the niwuries us	ed by routing aprotocols.		-		
1	What is meant by segme	ent?		2	CO4	1.1
	What is meant by segme Define TCP	nt?		2	CO4 CO4	1.1 1.1
	What are the inwittes us What is meant by segme Define TCP What is the purpose of I	ent? Domain Name System?		2 2 2 2 2	CO4 CO4 CO5	
1141	What are the inwrites us What is meant by segme Define TCP What is the purpose of I Define HTTP.	ent? Domain Name System?		22		CO4 CO4 CO5 CO5

Answer all the Units All Questions carry equal Marks

Q.	1	Question	M	CO	BL.
	-	UNIT-I			
2)	2	Explain about wireless transmission	5	COI	1.3
	b	Write about twisted pair cable and coaxial cable	5	COI	1.2
		OR	-		
3)	a	Explain about various transmission media in physical layer with a neat sketch	5	COI	1.3
	h	Discuss about Internet standards	5	COL	1.2
	_	UNIT-II			
4)	a	1 xplain about Error detection and Error Correction.	5	CO2	13
	b	Mention the types of errors and explain each type.	5	CO2	1.2
_		OR	a constant		
5)	a	Explain Hamming Code in Error Correction	15	CO2	13
	b	Explain CSMA/CD and CSMA/CA in detail	5	CO2	12

Page 1 of 2

C

	_	UNIT-III			
6)	а.	Explain store and forward packet switching.	5	CO3	1.3
	b.	Difference between Broadcasting and Multi casting.	5	CO3	1.2
		OR			
7)	a.	Explain token bucket algorithm with neat diagram.	5	CO3	1.3
	b.	Explain different types of routing algorithms.	5	CO3	1.3
		UNIT-IV			
8)	a.	Enumerate the mechanism of three-way handshake protocol for TCP.	5	CO4	L4
	b.	Explain the function of TCP/IP protocol.	5	CO4	1.3
		OR			
9)	a.	Explain about elements of transport protocols.	5	CO4	L3
	b.	Show the different approaches in Packet Switching. Explain them in detail.	5	CO4	1.2
		UNIT-V			
10)	a.	Explain in detail about function and structure of e-mail protocol.	5	CO5	1.3
	b.	Write briefly about World wide web.	5	COS	1.2
		OR			
11)	a.	Explain about Application layer and its services in detail?	5	CO5	1.3
	b.	Explain the working of Electronic mail.	5	COS	1.2

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Page 2 of 2

		NARSIMHAREDDY ENGINEERING COLLEG (UGC AUTONOMOUS)	E		
	11 8.	Tech II Semester (NR21) Regular & Supplementary Examination	1, Ju	ne 202	5
		COMPUTER NETWORKS			
		(Computer Science and Engineering (Data Science))			
Tia	ie : 3	hours Maximum	Ma	rks: 7	D
		Inits question paper contains two parks (10 sub-questions are Part A is computery which carries 20 marks (10 sub-questions are unit carry 2 Marks). Answer all questions in Part A Part B Consists of 5 Units. Answer one question from each unit. carries 10 Marks and may have a, b sub-questions Part-A Answer all questions	Ea (2)	o from ch que Mari	cach stion (3)
	No	Overties	м	co	BL.
FX.	1.	What is the primary function of network software?	2	COL	LI
1.1	16	Differentiate between a Hub and a Switch in a network.	2	COL	L1
	e.	How does a simplex stop-and-wait protocol differ when used in a noisy channel?	2	C02	1.2
	d.	What is the difference between forward and backward error correction?	2	CO2	LI
	e	How does the network layer operate in the context of the Internet?	2	CO3	1.2
	1.	List the factors that influence QoS in network communication.	2	CO3	LI
	R	List the services provided by the transport layer.	2	CO4	LI
	h	List the advantages and disadvantages of using TCP in network communication.	2	CO4	LI
	1	11-has been down in some system?	12	LCO2	1.1

Hall Ticket No.:

Q.P Code: DS3203PC

 What is the domain name system?
 Z COS L1
 J. List the main functions of simple network management protocol.
 Z COS L1 (50 Marks)

Part-B Answer all the Units All Questions carry equal Marks

0	No	Question	M	CO	BL
-90		UNIT-I			
2)	8.	Explain the OSI model and its seven layers briefly with a neat sketch.	5	COI	B
	b.	Discuss the process of data transmission through fiber optic cables.	5	COI	1.2
	-	OR			
3)	a.	Briefly explain ARPANET and its significance in the history of computer networking	5	COI	IJ
	b.	Describe twisted pair cables and their advantages in working.	M d layers briefly with a 5 C on through fiber optic 5 C inficance in the history 5 C dvantages in working, 5 C H w protocols and their 5 C	COL	1.2
-	1	UNIT-II			
4)	а.	Explain the concept of sliding window protocols and their advantages over stop-and-wait protocols	5	CO2	ω
_	_			Pag	# 1 of 2

-	h	Discuss the operation of carrier sense multiple access	5	CO2	1.2
	-	protocols in the medium access sublayer.	_		
-	·	OR			- 10
5)	a.	Differentiate between Go-Back-N and Selective Repeat protocols in sliding window techniques.	5	CO2	
	b.	Explain the ALOHA protocol and how it addresses the	5	CO2	13
	-	UNIT-III			
6)	a.	What are the primary design issues in the network layer, and why are they crucial for network architecture? Explain.	5	C03	1.2
	h	Explain the Internet Protocol addressing structure	5	CO3	_13
		OR			
7)	4	Discuss the operation of flooding as a routing algorithm in the network layer.	5	CO3	1.2
-	b.	Explain the principles of distance vector routing algorithms and arovide an example.	5	CO3	D
-	-	UNIT-IV			
8)	a.	Discuss the role of connection management in transport layer neutocols.	5	CO4	1.2
-	b.	Explain scenarios where UDP is preferred over TCP in network applications.	5	CO4	B
-		OR			
9)	a.	Describe the transmission control protocol and its main features.	5	CO4	្រះ
	b.	Explain the concept of negative acknowledgements in TCP	5	CO4	D
	-	UNIT-V			
101		Explain the hierarchical structure of domain names in DNS.	5	CO5	13
	b.	Discuss the architecture of SMTP.	5	COS	1.2
-	-	OR			
11)	2.	Describe the concept of streaming audio and video over the laternet.	5	COS	IJ
	h	Write about any one protocol for streaming video.	5	COS	L2

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Previous Question Papers





	8.	Write a detailed summary on TCP and UDP protocols.	[10]
Ċ	9.	State and explain the elements of transport protocols.	[10]
	10.	Explain the following:	
		b) MTP.	[5+5]
	11.a)	Describe the components of electronic mail system.	10.0
	D)	Differentiate between www and internet,	[5+5]
		05	
		ý k	
		<i>N</i>	
		8	
		No	
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			3
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Code No: 125DT

JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD B. Tech III Year I Semester Examinations, May - 2018 **COMPUTER NETWORKS** (Common to CSE, IT)

Time: 3 hours

2.

Note: This question paper contains two parts A and B. Part A is compulsory which carries 25 marks. Answer all questions in Part A. Part B consists of 5 Units. Answer any one full question from each unit. Each question carries 10 marks and may have a, b, c as sub questions.

PART - A

1.a)	What is Internet. Differentiate it from intranet.	[2]
b)	Discuss the design issues of data link layer.	[3]
c)	When do we use hubs?	[2]
d)	What are main functionalities of routers? What is purpose of using multiprotocol	
	routers?	[3]
e)	What is optimality principle?	[2]
f)	Discuss congestion control algorithms on brief.	[3]
g)	What is CIDR addressing	[2]
h)	Discuss the principles of internetworking.	[3]
i)	What is silly window syndrome?	[2]
j)	Draw TCP and UDP headers.	[3]

PART - B

Compare and contrast OSI and TCP/IP reference models. Critique on each model. [10] OR Explain sliding window protocol. 3.a) Describe go back N protocol. b) [5+5]

4. Define collision. Explain collision free protocols. Mention advantage of each protocol. [10]

OR

5.	Explain the following:	
	a) Bridges	
	b) Gateways	
	c) Repeaters.	[10]
- \		

- The major problem with distance vector routing algorithm is 'count to infinity'. How 6.a) exchange complete path form router to destination instead of delay, helps in solving count to infinity problem.
- Explain the design issues of network layer. b) [5+5] OR [10]
- Discuss the hierarchical routing with examples. 7. www.jntufastresult.com

Max. Marks: 75

(25 Marks)

(50 Marks)

8.	Given a network address of 192.168.100.0 and a subnet mask of 255.255.255.192. a) How many subnets are created?		
	b) How many hosts are there per subnet?	[5+5]	
	OR		
9.a)	Discuss ICMP Messages.		
b)	Explain Tunneling in Internet layer.	[5+5]	
10.	Illustrate the TCP connections, TCP releases with state transition diagram.	[10]	
	OR		
11.	Describe DNS with diagrams and real-time examples.	[10]	

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Code No: 125DT JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD B. Tech III Year I Semester Examinations, November/December - 2017 **COMPUTER NETWORKS** (Common to CSE, IT)

Time: 3 hours

Note: This question paper contains two parts A and B. Part A is compulsory which carries 25 marks. Answer all questions in Part A. Part B consists of 5 Units. Answer any one full question from each unit. Each question carries 10 marks and may have a, b, c as sub questions.

PART - A

1.a) Write the advantages of optical fiber over twisted-pair and coaxial cables. [2] What are the advantages of having layered architecture? [3] b) Briefly explain the difference between switch and router. [2] c) Sketch the Manchester encoding for the bit stream: 0001110101. [3] d) Give the advantages of hierarchical routing. [2] e) Differences between CO and CL. f) [3] Explain DHCP. [2] **g**) What are the functions of ICMP? h) [3] What is the architecture of WWW? i) [2] Explain the differences between POP3 and IMAP. i) [3]

Compare and contrast the OSI and TCP/IP reference models. 2.a) What are the different types of error detection methods? Explain the CRC error detection technique using generator polynomial x^4+x^3+1 and data 11100011. [5+5 b) [5+5] OR Discuss about the various transmission media available at the physical layer. 3.a) b) Explain about GBN Sliding Window Protocol. [5+5]Explain the differences between the switching methods. 4.a) b) Elucidate the CSMA schemes. [5+5] OR Illustrate the frame structure of IEEE 802.3. 5.a) b) Give a detail note on the ALOHA protocols. [5+5]6.a) Elucidate Distance Vector Routing Algorithm with example. b) Describe the problem and solutions associated with distance vector routing. [5+5] OR Explain the general principles of congestion control. 7.a) Describe congestion control in datagram subnets. [5+5] b)

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PART - B

(50 Marks)

(25 Marks)

Max. Marks: 75



8.a)	Elucidate the special IP addresses used in internet.				
b)	Discuss the significance and the operation of NAT.				
		OR			
9.a)	Illustrate the con	nnection establishment and releas	se in transport la	yer.	
b)	How crash recov	very is managed at the transport l	ayer?	[5+5]	
10.a)	Explain Real-tim	e transport protocol.			
b)) When user clicks a hyperlink, what are the steps that occur between the user's click and				
	the page being d	isplayed?		[5+5]	
		OR			
11.	Write short note	s on the following:		[10]	
	(a) MIME	(b) Audio compression	(c) DNS	(d) Voice over IP.	

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Code No: 125DT JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD B. Tech III Year I Semester Examinations, November/December - 2017 **COMPUTER NETWORKS** (Common to CSE, IT)

Time: 3 hours

Note: This question paper contains two parts A and B. Part A is compulsory which carries 25 marks. Answer all questions in Part A. Part B consists of 5 Units. Answer any one full question from each unit. Each question carries 10 marks and may have a, b, c as sub questions.

PART - A

1.a) Write the advantages of optical fiber over twisted-pair and coaxial cables. [2] What are the advantages of having layered architecture? [3] b) Briefly explain the difference between switch and router. [2] c) Sketch the Manchester encoding for the bit stream: 0001110101. [3] d) Give the advantages of hierarchical routing. [2] e) Differences between CO and CL. f) [3] Explain DHCP. [2] **g**) What are the functions of ICMP? h) [3] What is the architecture of WWW? i) [2] Explain the differences between POP3 and IMAP. i) [3]

Compare and contrast the OSI and TCP/IP reference models. 2.a) What are the different types of error detection methods? Explain the CRC error detection technique using generator polynomial x^4+x^3+1 and data 11100011. [5+5 b) [5+5] OR Discuss about the various transmission media available at the physical layer. 3.a) b) Explain about GBN Sliding Window Protocol. [5+5]Explain the differences between the switching methods. 4.a) b) Elucidate the CSMA schemes. [5+5] OR Illustrate the frame structure of IEEE 802.3. 5.a) b) Give a detail note on the ALOHA protocols. [5+5]6.a) Elucidate Distance Vector Routing Algorithm with example. b) Describe the problem and solutions associated with distance vector routing. [5+5] OR Explain the general principles of congestion control. 7.a) Describe congestion control in datagram subnets. [5+5] b)

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PART - B

(50 Marks)

(25 Marks)

Max. Marks: 75

R15

8.a)	Elucidate the special IP addresses used in internet.				
b)	Discuss the significance and the operation of NAT.				
		OR			
9.a)	Illustrate the con	nnection establishment and releas	se in transport la	yer.	
b)	How crash recov	very is managed at the transport l	ayer?	[5+5]	
10.a)	Explain Real-tim	e transport protocol.			
b)) When user clicks a hyperlink, what are the steps that occur between the user's click and				
	the page being d	isplayed?		[5+5]	
		OR			
11.	Write short note	s on the following:		[10]	
	(a) MIME	(b) Audio compression	(c) DNS	(d) Voice over IP.	

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